(DRMO) to ensure a successful program. Units deploying to Kirtland AFB will participate in the PMRP at Kirtland AFB.

2. Objective. To establish a base program to control and promote the economic recovery of precious metals from excess, used, and surplus precious metal-bearing material.

3. Responsibilities.

3.1. Air Base Wing Commander (377 ABW/CC) will:

3.1.1. Appoint a primary PMRP manager (and an alternate PMRP manager when deemed appropriate) in writing, to act as the focal point for all matters concerning the PMRP. The PMRP manager will then provide a copy of the appointment letter to the DRMO.

3.2. The PMRP Manager will:

3.2.1. Ensure that local instructions comply with overall DoD and Air Force requirements.

3.2.2. Ensure that each organization on the installation which is involved in the PMRP appoints a PMRP monitor and an alternate as required.

3.2.3. Maintain a list of the organization's PMRP monitor's/alternate's name, phone number, location and, as applicable, type of recovery equipment, kind of precious metals scrap generated, and the kind of precious metals, and high precious metals content items used, such as anodes, brazing, and solder which have controlled item code (CIC) "R" assigned. Maintain a record of fine precious metals that are furnished as government-furnished materiel (GFM) to include contract number and contractor's name and address. Do not maintain a list of organizations that are not involved in the PMRP.

3.2.4. Ensure that organizations that receive, issue, and use fine precious metals or high precious metals content items which are assigned CIC "R" appoint an individual, in writing, to receive and issue these items.

3.2.5. Ensure that each organization which generates a hyposolution have a silver recovery unit in place. Where electrolytic units are installed, appoint in writing an individual to harvest the silver flake or sludge. Ensure a third party (one who does not operate the equipment or harvest the silver)witnesses the harvesting and weighs the flake, sludge or the cartridge, and signs the disposal turn-in document as being accurate and true.

3.2.6. Ensure that each unit initiates and maintains a self-assessment program. Include, as a minimum, control and protection of precious metals residue; compliance with receipt, issue, storage and turn-in procedures. If applicable, periodically test hyposolution drains from electrolytic units and silver recovery cartridge units.

3.2.7. Notify the PMAR of any requirements for precious metals recovery equipment, repair parts, and supplies that are furnished by the Defense Logistics Agency (DLA) on a free issue basis. Also, request the PMAR provide any training workshops, seminars, or briefings required.

3.2.8. Schedule and conduct inspections of each organization at least once every 24 months to review the operations, documentation, and compliance with overall program requirements. Prepare and maintain a report of deficiencies noted during inspections. Provide a suspense copy of

findings to the organization for their corrective actions. Perform a follow-up visit to ensure that unit monitors correct discrepancies.

3.2.9. Notify the appropriate depot item manager of any items found to contain precious metals, if a precious metals indicator code (PMIC) has not been assigned, or if the PMIC is incorrect.

3.2.10. Act as liaison with the Defense Reutilization and Marketing Service (DRMS) to keep abreast of precious metals recovery techniques. Request guidance concerning procedures for the recovery and transfer of precious metals, from DRMS. (Notify DRMS/DWO of requirements for precious metals recovery equipment, spare parts and supplies.) Recovery equipment, spare parts and supplies are furnished by DLA on a free-issue basis.

3.2.11. Ensure that organizations which receive, issue, handle, and use fine precious metals or high precious metals content items assigned a CIC "R," keep accurate records and ensure a disinterested third party audits these records and quantities of material on hand at least semi-annually.

3.3. Unit Commanders will:

3.3.1. Appoint, in writing, a primary and alternate PMRP monitor for their organization. Unit commanders must sign the appointment letter. (Forward a copy of the appointment letter to the Base PMRP manager.)

3.3.2. Appoint, in writing, individuals to harvest silver flake or sludge from electrolytic units or to change silver recovery cartridges, if used by an organization.

3.3.3. Appoint, in writing, personnel other than PMRP monitors, to receive, issue, and turn-in fine precious metals or high precious metals content items assigned a CIC "R" if these items are used by the organization.

3.4. Appointed Organization PMRP Monitors will:

3.4.1. Cooperate to the fullest extent with the base PMRP manager and the local DRMO to ensure compliance with PMRP guidance.

3.4.2. Attend initial PMRP training when assigned as an organization's PMRP monitor. Provide training to shop level monitors, if assigned by unit. Document training provided to shop level monitors and maintain records.

3.4.3. If needed, develop and maintain an operating instruction (OI) to manage the organization's PMRP. Furnish copies of OIs to the base PMRP manager.

3.4.4. Develop and maintain a self-inspection checklist for the organization's PMRP. This checklist will include, as a minimum, the control and protection of precious metals residue; compliance with receipt, issue, storage, and turn-in procedures; and testing of hyposolution at the drain from the silver recovery units. Perform self-assessments in May and November. The unit monitors must conduct a test and check the results daily for silver in the outflow and sulfiding while the unit is operating. The unit monitor must conduct laboratory tests whenever daily field tests indicate silver discharge. The unit monitor must keep records on file in each work center.

3.4.5. Ensure proper handling, accounting, safeguarding and security of fine precious metals or high precious metals content items assigned CIC "R" silver flake or sludge, and silver recovery cartridges.

3.4.6. Maintain accountable records for:

3.4.6.1. Fine precious metals received, issued, and turned in to DRMO.

3.4.6.2. Silver flake harvested from electrolytic units and turned in to DRMO.

3.4.6.3. Silver bearing sludge harvested from electrolytic units and stripping tanks and turned in to DRMO.

3.4.6.4. Silver recovery cartridges turned in to DRMO.

3.4.6.5. Other precious metal scrap turned in to DRMO.

3.4.6.6. Maintain a hand receipt of any equipment provided by the Defense Logistics Agency (DLA) PMRP.

3.4.7. Ensure organizational work centers generating precious metal scrap or precious metal items that retain their identity, collect and turn-in this material promptly to prevent the possibility of loss or theft.

3.4.8. Maintain a records folder for the organization's recovery program. The folder will contain the following information:

3.4.8.1. All appointment letters.

3.4.8.2. A current copy of KAFBI 23-501, *Precious Metals Recovery Program* (PMRP).

3.4.8.3. Any unit operating instructions, if applicable.

3.4.8.4. Copies of all internal and external inspection reports.

3.4.8.5. Unit copies of all turn-in documents.

3.4.8.6. Turn-in control log. This is an optional document for unit monitors, but the work center must have a local document to track turn-ins.

3.4.8.7. Recovery Unit Test Log. Conduct a test and check the results for silver in the outflow and sulfiding while the silver recovery unit is operating. Laboratory tests will be as required or whenever indicated. This is an optional document for unit monitors but if it's not kept in the unit's file, each work center must document all testing of discharges.

3.5. Resource Protection. Organizations will use AFI 31-209, *Air Force Resources Protection Program,* as a guide when establishing protection requirements for fine precious metals, items bearing precious metals and high precious metals content items.

3.5.1. Determine locally specific protection requirements such as the need for alarms, controlled areas, and physical security of materials and equipment, considering the value of each category. Request guidance from the base security forces, Resource Protection Branch, 377 SFS/SFAR and the Resource Protection Executive Committee (RPEC) when establishing these requirements.

4. Identification of Precious Metals.

4.1. Precious Metal Indicator Codes (PMIC). An assigned PMIC identifies items that contain precious metals. PMICs except "A" indicates recoverable items **(**see **Attachment 1).** Anyone discovering an item that might contain precious metals without an assigned PMIC, will notify the base PMRP manager.

4.2. Recoverable PMIC. Assignment of a recoverable PMIC will cause a phrase to print on the issue document that identifies the type of precious metals it contains. All organizations using items with recoverable PMIC are tasked with turn-in or recovery of precious metals.

4.3. Bench Stock Items. The Organizational Bench Stock Listings contain the PMIC assigned to bench stock items. Highlight, in blue, bench stock bin labels and shadow boards for precious metals items. This will ease the identification and aid in recovery of these items by requiring a one-for-one exchange whenever an item is issued.

5. Safety, Health, and Environmental Considerations.

5.1. Processing Precious Metals. Many of the procedures inherent in processing precious metals bearing material or scrap are dangerous and require preventative measures to preclude injury or illness to personnel, damage to property, or pollution of the environment. Among the more common recognized hazards associated with precious metals processing are:

5.1.1. Exposure. Prolonged exposure to low level concentrations of gold or silver compounds, varying in toxicity, could cause chronic liver degeneration, blood disorders and skin allergies. Ingestion or inhalation of the compounds causes toxic effects. Contact the 377th Medical Group, Bioenvironmental Engineering Flight, 377 AMDS/SGPB, to determine if personal protective equipment is needed.

5.1.2. Dangerous Precious Metals. Some items containing precious metals are dangerous. Stripping and plating solutions or residues may contain acids and cyanide; silver-cadmium and silver zinc batteries contain acid and hydroxide electrolytes; some batteries contain explosive components; and computers may contain polychlorinated biphenyl transformers (PCBs).

5.1.3. Silver Recovery. Possible ground and water pollution could occur when spent hypo- solution is discharged from a silver recovery operation. Use of electrolytic silver recovery equipment could also present electrical shock hazards.

5.1.4. Dental Amalgam. Due to the Environmental Protection Agency (EPA) declaring amalgam a hazardous/medical waste and Department of Transportation (DOT) restrictions on the transportation of dental amalgam, this material will no longer be processed for recovery under the PMRP.

6. Performance Work Statements (PWS).

6.1. Any organization preparing a performance work statement for any activity operating on Kirtland AFB, where precious metals are used or recovered, must ensure they address the precious metals recovery program in their PWS. Furnish a copy of all PWSs involving precious metals to the base PMRP manager. DoD retains ownership of all precious metal-bearing materials irrespective of the recovery method, unless a waiver has been granted through DLA. Areas to consider are:

•Who will furnish raw materials such as film, film paper, acids, solutions, anodes,

repair parts, etc.

•Who will retain recovery rights to expended materials.

•Who will furnish equipment required for recovery of precious metals.

•How spent hyposolutions will be processed for silver recovery.

•Who will perform minor maintenance or calibration on equipment.

•Who will maintain required records.

6.2. The unit requesting a PWS involving precious metal-bearing materials will provide the base PMRP manager a copy of each PWS.

7. Specific Recovery Procedures.

7.1. Items Bearing Precious Metals. Turn in items bearing precious metals that retain their identity after use through Base Supply Inspections Branch, 377 LG/LGSDI, by their assigned stock number.

7.2. Scrap Material. Each organization or work center will have containers available for collection of precious metals scrap. Provide separate containers for each PMIC or scrap classification list (SCL) coded item **(**see **Attachment 2**). Collection of scrap by the PMIC or SCL is at the option of the generating organization or work center.

7.2.1. Do not place nonprecious metal scrap in containers designated for precious metals scrap.

7.2.2. Each organization or work center will maintain a recovery log to record turn-in of precious metals scrap. This log will consist of the following information:

•Description of material.

•PMIC or SCL code, as applicable.

•Weight of material turned in indicating the gross, tare and net weights.

•Signature of witness and date, if applicable.

7.2.3. Each PMIC or SCL will require a separate DD Form 1348-1A, **DoD Single Line Item Release/Receipt Document (**see **Attachment 3)**.

7.3. Silver Recovery Unit. Test, at least monthly when not in use, and daily whenever unit is operating. Use silver-estimating test paper to test spent hyposolution draining from these units or cartridges and document test results.

7.3.1. Generating activities are responsible for performing minor preventative maintenance such as: day-to-day adjustments, cleaning, and replacement of fuses and hoses on the recovery equipment received from Defense Logistics Agency (DLA). Major repairs or replacement is the responsibility of the DLA. The base PMRP manager will assist in coordinating repair and/or replacement of defective equipment through DLA points of contact.

7.3.2. If recovery equipment becomes inoperative, collect spent hyposolutions in containers pending repair of equipment or alternate processing arrangements. **DO NOT ALLOW hypo-solution to enter drains without first being processed through silver recovery equipment.**

7.3.3. When harvesting silver flake or sludge from electrolytic units or replacing recovery cartridges or cores, personnel performing the harvesting and a disinterested witness will verify weights and document the weight on the disposal turn-in document.

7.4. Recovery of Silver Flake or Sludge. Silver flake or sludge may be considered hazardous under subtitle C of the Resource Conservation and Recovery Act (RCRA). Silver thiosulfate retained in residual fixer solution may cause it to fail environmental protection toxicity tests for silver. Remove silver thiosulfate by proper washing using the following procedures:

7.4.1. Break the silver into small pieces.

7.4.2. Place the pieces in a container and flow water slowly over the silver for several hours.

7.4.3. Soak the silver overnight and then test the water with silver estimating paper.

7.4.4. If the test is negative, place the silver in a sealed container and process a turn-in to the local DRMO. If the test is positive, perform steps 7.4.2. and 7.4.3. until the test is negative.

7.5. Recovery Cartridges Containing Removable Cores. Air dry removable cores for a minimum of 24 hours and then place in a double plastic bag or leakproof container before processing for turn-in to the DRMO.

8. Turn-In Procedures.

8.1. Exempt all item codes and process all ERR XD, XF, ND, and NF items, and ERRC XB3 items that retain their identity after use, using normal supply turn-in procedures.

8.2. Scrap Material. Segregate condemned XB3 precious metal items that do not retain their identity after use from other scrap and turn them in under the PMRP. To prevent and minimize the possibility of theft, they should be turned in promptly. Turn-in will be made using an off-line (do not post)

DD Form 1348-1A, **Issue Release/Receipt Document**. See **attachment 3** for correct format. Sources of precious metals can be found at **attachment 4**.

8.3. Transportation . The Base Supply Inspection Branch will issue the off-line document for recoverable precious metal. The monitor will take the completed AF Form 2005, **Issue/Turn-In Request**, to the Inspection Branch. Do not take material to base supply unless requested to do so by base supply. Once base supply issues a DD Form 1348-1A, call DRMO and schedule a date and time for turn-in. On the scheduled date or time, transport material to DRMO for turn-in.

8.3.1. DRMO personnel will verify the weight of the material delivered, and sign the DD 1348-1A acknowledging receipt of the material, and return one copy to the person making the delivery.

8.3.2. The person making the delivery will forward a copy of the signed DD 1348-1A document to the base PMRP manager, base supply, and to the organization's PMRP monitor for filing in their PMRP records folder.

GARY D. DILLS, Colonel, USAF
Commander

Attachment 1

PRECIOUS METALS INDICATOR CODES (PMIC)

PMIC	TYPE OF PRECIOUS METAL
A	Item does not contain precious metal
C	Item contains a combination of two or more precious metals (silver, gold, platinum)
G	Item contains gold
P	Item contains platinum family metals
S	Item contains silver
U	Precious metal type is unknown
V	Precious metal type varies between manufacturers

Punchouts
Resins--Plating
Salts-Chemical
Sludge--Plating
Solutions
Sponge
Tin-Lead Alloys
Contaminated Transistors
Wiping Rags
Wire

PLATINUM-BEARING MATERIALS

Catalysts
Chemicals
Contacts
Clad Materials
Dental Alloys
Dental Scrap
Dental Sweepings and Grindings
Jewelry Scraps
Jewelry Sweeps
Laboratory Wire
Magneto Points
Powders and Paste
Solutions--Plating
Spark Plugs--Aircraft
ThermocoupleWire

PALLADIUM BEARING MATERIALS

Catalysts
Clad Materials
Contact Points
Dental Alloys
Dental Scraps
Dental Sweeps
Jewelry Scraps (Sweeps)
Paste
Plated Parts
Powders
Relays--Electrical
Salts--Chemicals
Sludge
Solutions
Wire

SCRAPS CONTAINING COMBINATIONS OF PRECIOUS METALS

(Gold, Silver, Platinum, and Palladium)

Assemblies--Components
Bullion
Carbon
Catalysts
Chemicals
Chips
Drillings
Electronic Scrap
High Temperature Alloys
Paints
Paste
Powders
Relays--Electrical
Resins
Rings
Salts
Solutions
Sweeps
Telephone Switching Scrap
Wire

Attachment 5

GLOSSARY

CIC	Controlled Item Code
DLA	Defense Logistcs Agency
DoD	Department of Defense
DRMO	Defense Reutilization and Marketing Office
DRMS	Defense Reutilization and Marketing Service
EPA	Environmental Protection Agency
EPC	Environmental Protection Committee
ERRC	Expendability, Recoverability, Reparability Category
OI	Operating Instructions
PMIC	Precious Metals Indicator Code
PMRP	Precious Metals Recovery Program
PWS	Performance Work Statement
SCL	Scrap Classification List